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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/646,389

08/22/2003

Yiliang Wu

D/A2375

4880

25453

7590

11/24/2004

PATENT DOCUMENTATION CENTER

XEROX CORPORATION

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ROCHESTER, NY 14644

EXAMINER

KIELIN, ERIK J

ART UNIT

PAPER NUMBER

2813

DATE MAILED: 11/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/646,389

Applicant(s)

WU ET AL.

Examiner

Erik Kielin

Art Unit

2813

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-45 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Election/Restrictions*

1. This application contains claims directed to the following patentably distinct species of the claimed invention:

**One** must be elected from each of the following groups for a single combination:

**A. Identity and number** of thienylene unit in repeating segment of polymer

- A-1. structure (I) only and **one number** selected from 1 to 10 (e.g. 3)
  - A-2. structure (II) only and **one number** selected from 1 to 10 (e.g. 3)
  - A-3. both structures (I) and (II) and **one number** for **each** from 1 to 10 (e.g. 3)
- Election of A-2 or A-3 further requires election of R'
- A-2-1. alkyl
  - A-2-2. alkoxy
  - A-2-3. halogen

**B. Identity and number** of arylene unit in repeating segment of polymer

- B-1. structure (IIIa) only and **one number** selected from 1 to 3 (e.g. 1)
- B-2. structure (IIIb) only and **one number** selected from 1 to 3 (e.g. 1)
- B-3. structure (IIIc) only and **one number** selected from 1 to 3 (e.g. 1)
- B-4. **one combination** selected from (IIIa), (IIIb), and (IIIc)

**C. Identity and number** of R substituents bonded to each ring of each arylene unit

- C-1. alkyl and **one number** selected from 0 to 4 (e.g. 2)
- C-2. alkoxy and **one number** selected from 0 to 4 (e.g. 2)

**D. Sequence** of elected segments

- D-1. structure (IV-a)
- D-2. structure (IV-b)

**E. Substrate material**

- E-1. sheet of polyester
- E-2. sheet of polyimide
- E-3. sheet of polycarbonate
- E-4. glass

Art Unit: 2813

F. Gate electrode material

- F-1. gold
- F-2. nickel
- F-3. aluminum
- F-4. platinum
- F-5. indium titanium oxide
- F-6. a conductive polymer
- F-7. a conductive ink
- F-8. a conductive paste
- F-9. polystyrene sulfonate-doped poly(3,4-ethylenedioxythiophene)

G. Gate dielectric material

- G-1. silicon nitride
- G-2. silicon oxide
- G-3. polyester
- G-4. polycarbonate
- G-5. polyacrylate
- G-6. poly(methacrylate)
- G-7. poly(vinyl phenol)
- G-8. polystyrene
- G-9. polyimide
- G-10. epoxy resin
- G-11. metal oxide dispersed in polymer composite

H. Source/Drain electrode material

- H-1. gold
- H-2. nickel
- H-3. aluminum
- H-4. platinum
- H-5. indium titanium oxide
- H-6. a conductive polymer
- H-7. a conductive ink
- H-8. a conductive paste
- H-9. polystyrene sulfonate-doped poly(3,4-ethylenedioxythiophene)

Note that Applicant's elections from each of the lettered groups A through H must be consistent with the elected claims. **Should Examiner find the Applicant's indication of the claims reading-on the elected species to be inconsistent with the elected species, Examiner will withdraw those claims from further consideration, as consistent with Applicant's election.** Applicant is also advised to fix the antecedent basis problems in each of claims 38 and

Art Unit: 2813

39 prior to commencement of the examination, so that a proper indication of which species claims 38 and 39 read on.

Applicant is required under 35 U.S.C. 121 to elect a single disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, **no claim is generic**. (Compare claims 1 and 45. There is no requirement in claim 45 limiting the number of arylene units in the repeating segments of the polymer in the **TFT**, while claim 1 requires the number of arylene units in the repeating segment to be from 1 to 3 in the **electronic device**.) (See MPEP 806.04(d) for the definition of a generic claim.)

Applicant is advised that a reply to this requirement must include an identification of the species that is elected consonant with this requirement, and a listing of all claims readable thereon, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the

Art Unit: 2813

examiner finds one of the inventions unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

2. As per MPEP 812.01, because the restriction requirement is complex, no telephone election is being provided.

3. Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

4. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Erik Kielin whose telephone number is 571-272-1693. The examiner can normally be reached on 9:00 - 19:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Whitehead, Jr. can be reached on 571-272-1702. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2813

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Erik Kielin  
Primary Examiner  
November 20, 2004